



John Muir Pollinator Way Report: East Lothian

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Saving the small things that run the planet

Summary

The John Muir Way, opened in 2014, stretches 134 miles through nine local authority areas including East Lothian.

This B-lines project, the first in Scotland, has identified new opportunities for grassland habitat creation, enhancement and management along the route of the John Muir Way as it passes through East Lothian as well as 1.86 miles either side of this. Through this mapping exercise a number of sites have been identified including 39 schools and nurseries; 17 hospitals and care homes; 51 places of worship and cemeteries; 12 historic landmarks and buildings; and 7 train stations. Additionally, 16 golf courses (1,024.2 ha), 27 public parks and play spaces (104.2 ha) and 1 country park (684.25 ha) were identified.

There are a number of sites within this project that have nature conservation designations, including 17 Sites of Importance for Nature Conservation (2,051.86 ha), 4 Sites of Special Scientific Interest (96.42 ha) and 1 Local Nature Reserve (575.23 ha). A further 3 sites have previously been identified as having an Open Mosaic of Habitat on Previously Developed Land with a total of 2.43 ha.

By mapping new opportunities this will aid in the future development of projects that will provide real benefits to our declining populations of pollinating insects of bees, wasps, hoverflies and butterflies as well as other wildlife that these habitats support.

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1. Introduction

The route of the John Muir Way stretches 134 miles (215 kilometres (km)) from Helensburgh in the west to Dunbar on the east coast (Figure 1). This walking and cycling route was opened in 2014 to commemorate the 100th anniversary of John Muir's death.



Figure 1. Route of the John Muir Way from Helensburgh in the west to Dunbar on the east coast.

During its 134 miles stretch, the John Muir Way passes through nine different local authority areas and goes through and close to several towns, including Helensburgh, Balloch, Lennoxton, Kirkintilloch, Falkirk, Edinburgh and Dunbar. This walking and cycling route passes through a varied landscape with a wide range of habitats including agriculture, parkland, coastland, housing as well as sites with various conservation designations. Many of these sites are important for a range of wildlife and plant species and allow the movement and mixing of species along and out with the route.

The route of the John Muir Way passes along the north coast of East Lothian and is 31.5 miles in total. From Musselburgh, the route travels along the coast of the Firth of Forth through Prestonpans, Cockenzie, Longniddry, Aberlady, Gullane, Direlton, North Berwick before turning south and going inland to John Muir's birthplace Dunbar.

1.1 B-lines

Since the 1940's, Britain has lost over 97% of its species-rich grassland to agriculture, housing developments and industry. B-Lines are an imaginative solution to the problem of the loss in wildflower meadows and the subsequent decline of pollinating insects. The B-Lines are a series of 'insect pathways' along which Buglife aims to create and restore at least 150,000 hectares (ha) of wildflower-rich habitat stepping stones across the UK. They link existing wildlife areas together, creating a network that will weave across the British landscape. This will provide large areas of brand new habitat benefiting bees and butterflies as well as a host of other wildlife.

B-Lines bring a range of benefits to wildlife, people and agriculture, including helping to conserve our native pollinators and a range of other wildlife; contributing towards the 2020 Biodiversity targets; helping our wildlife respond to climate change by making it easier for them to move around; increasing the number of insect pollinators and the benefits these bring to our farming sector (pollination being an important 'ecosystem service'); bringing nature to people; and giving opportunities for everyone to play their part and help create the B-Lines network.

Making the B-lines happen will take time and will need farmers, land owners, wildlife organisations, businesses, local authorities and the general public to work together to create flower-rich grassland in the best locations.

'John Muir Pollinator Way' is the first B-lines project in Scotland. Through this study, this project has mapped opportunities for wildflower grassland creation, enhancement and management along the route of the John Muir Way as it passes through East Lothian. This B-lines map will include not only areas that are currently used as amenity grassland such as at public parks and in school grounds but also sites that have nature conservation designations and are currently managed for their important grassland habitats. By mapping these opportunities it identifies where current habitat is, how it can be better managed and where projects should focus to further benefit wildlife and communities in the future.

2. Method

Opportunities for the creation, enhancement and management of grassland meadows and other habitats important for pollinating insects and other invertebrates were mapped using an online Geographic Information System (QGIS) along the 31.5 mile route of the John Muir Way as it passes through East Lothian as well as 1.86 mile (3km) either side of this. This area covers a total 22,185 ha of land.

Potential opportunities on sites with no nature conservation designations were identified based on if they held grounds for habitat creation and enhancement, these sites were then marked by a round circle and included high schools, primary schools, nurseries, hospitals, care homes, places of worship, cemeteries, historic landmarks, historic buildings and train stations.

Scotland's Greenspace Map, available from Scottish Natural Heritage (SNH) provides information about the type and extent of greenspace in urban Scotland in towns and cities with a population of over 3,000. This map was compiled in 2011 from greenspace data provided by the 32 Scottish local authorities and categorises greenspace into 23 different open space types (for example, public parks, private gardens, play areas, semi-natural, community gardens and allotments). Using Scotland's Greenspace Map, public parks, play spaces and golf courses were identified and mapped on the B-lines using polygons to calculate the area of each site; further information on the location and names of public parks and play spaces was obtained from several of the local authority websites. Additional areas of amenity grassland identified on Scotland's Greenspace Map, including residential, business and transport were not mapped due to the number of sites and complexity in mapping them.

Polygons of designated country parks with information on the size of each site were also added to this opportunity map after being downloaded from the SNH website.

Sites designated for nature conservation within this project were downloaded from the SNH website and mapped using polygons so that the size of the area could be calculated for each site; this included Local Nature Reserves (LNR) and Sites of Special Scientific interest (SSSI). Information on Sites of Importance for Nature Conservation (SINC) was obtained by asking East Lothian's biodiversity officer Stuart MacPherson. Shapefiles of these sites were also provided by the local authority.

As well as sites designated for nature conservation, all wildlife reserves were looked for within the project area. All sites identified belonged to the Scottish Wildlife Trust (SWT) and polygons of the reserves were added to show the location and size of each reserve within the project area.

In 2013, Buglife identified sites on Scotland's vacant and derelict land register with the UK Biodiversity Action Plan (UKBAP) priority habitat 'Open Mosaic of Habitat of Previously Developed

Land' (OMHPDL) and the shapefile which included the polygons for these sites was uploaded onto this B-lines opportunity map (Macadam *et al.* 2013).

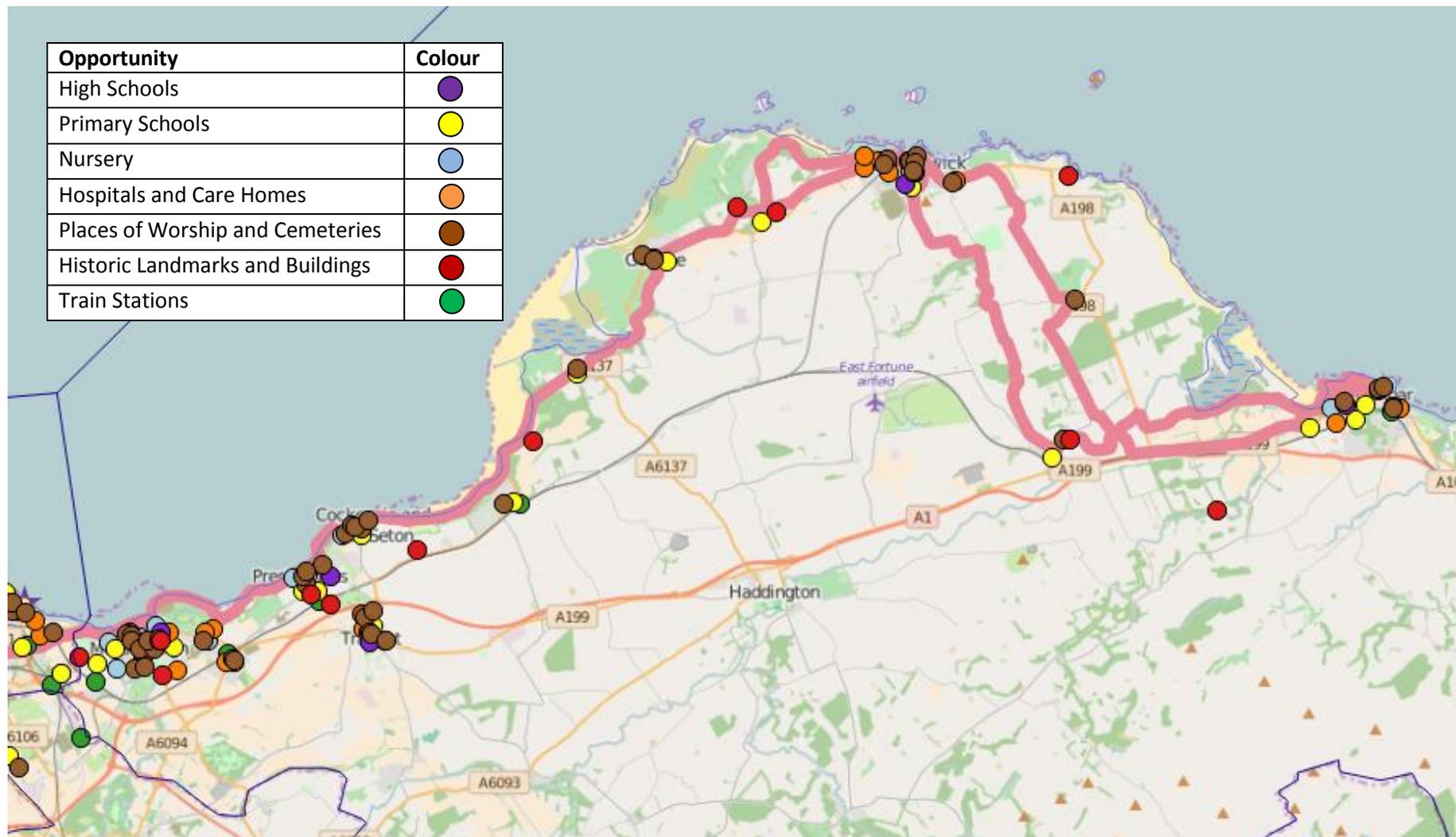
3. Results

A full list of opportunities identified can be found in Appendix 1.

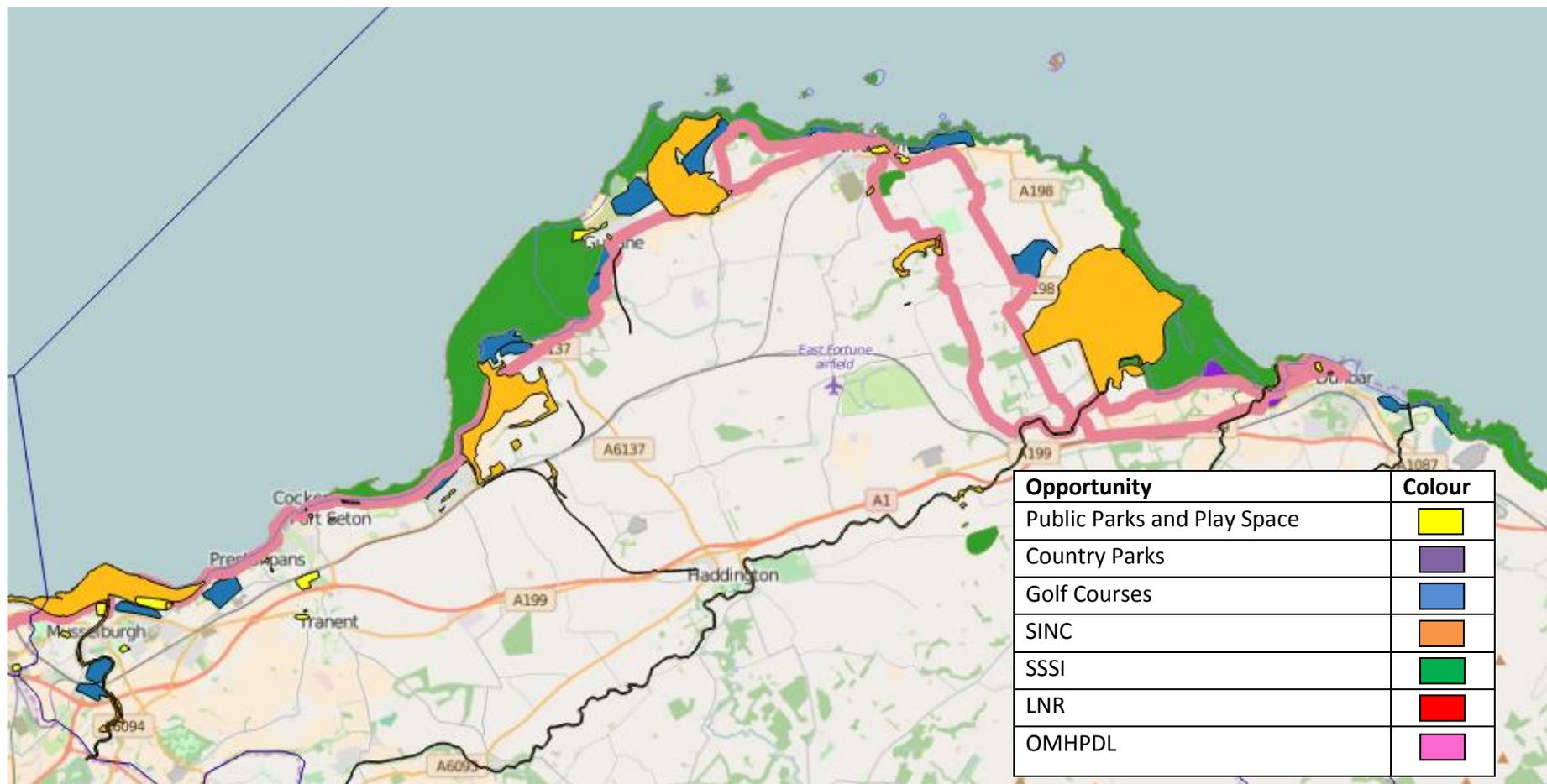
A total of 39 schools and nurseries were identified and this includes 7 high schools, 21 primary schools and 11 nurseries (Table 1; Map 1). A further 17 care homes and hospitals, 51 places of worship and cemeteries, 12 historic landmarks and buildings and 7 train stations were also identified (Table 1; Map 1). Within the project area there are 16 golf courses which cover a total of 1,024.2 ha (Table 1; Map 2). There are at least 27 public parks and play spaces that cover at least 104.2 ha of ground and include a variety of habitats from woodland, ponds and amenity grassland, additionally there is one park designated as a Country Park that is 684.25 ha (Table 1; Map 2). In total there are 17 SINC (2,051.86 ha), 4 SSSI (96.42 ha) and 1 LNR (575.23 ha) (Table 1; Map 2). A further 3 sites with OMHPDL cover a total of 2.43 ha within the project area (Table 1; Map 3).

Table 1. Total number of opportunities identified for each category mapped including the size of the area in for sites designated for conservation along with public parks, country parks and golf courses.

Opportunity	Total number	Total Area (ha)
High Schools	7	-
Primary Schools	21	-
Nursery	11	-
Hospitals and Care Homes	17	-
Places of Worship and Cemeteries	51	-
Historic Landmarks and Buildings	12	-
Train Stations	7	-
Golf Course	16	1024.2
Public Park	27	104.2
Country Park	1	684.25
SSSI	4	96.42
LNR	1	575.23
SINC	17	2,051.86
OMHPDL	3	2.43



Map 1. Opportunities of non-designated sites identified in East Lothian.



Map 2. Opportunities of sites designated for conservation along with public parks and golf courses identified in East Lothian.

4. Discussion

The John Muir Way is 134 miles long and has a varied landscape, passing through nine different local authority areas, various towns and cities as well as rural habitats. The 22,185 ha of land covered by this project in East Lothian has identified various opportunities for grassland habitat creation, enhancement and management within the grounds of schools, golf courses and public parks. Each of these potential opportunities differ in the communities involved and the habitats present but all have the potential to significantly increase and improve habitat for pollinating insects and other wildlife across the heartland of Scotland.

4.1 Schools

A total of 39 schools and nurseries were identified within this projects area and includes 7 high schools, 21 primary schools and 11 nurseries. Most schools and a majority of the nurseries have outdoor grounds that may include areas of amenity grassland as playing fields that are used by school children during breaks and during physical education (PE) lessons. Alongside these large areas of amenity ground, schools often have other outdoor areas that are may be used as a school garden or are left as areas of additional amenity grassland. It is these areas that can be enhanced for wildlife by creating biodiverse school gardens or changing the management to reduce the cutting of the area. This would not only benefit pollinating insects and other wildlife but also the school children who could help create the habitats and use them for learning and play. Wildflower meadows within the school grounds could be created with the help of the school children and parents and be managed with the help of the local authority if required.

To further benefit pollinating insects such as solitary bees, school children could be encouraged to create homes for them in wood working class. These can be installed in south facing and warm areas around the school and will create homes for wood nesting solitary bees and other invertebrates.

Of the 39 schools identified in this survey, 16 (includes 2 high schools, 12 primary schools and 2 nurseries) are registered with the RHS School Gardening Scheme which aims to inspire and support schools to provide children with gardening opportunities to enhance their skills and boost their development. These results highlight how many schools are keen to get their pupils involved in outdoor learning to encourage them to get outside, improve their health and develop new skills.

Almost all of the schools and many of the nurseries identified are registered as an Eco-school, many of which have various awards associated with this; only Regius Christian School is not registered. Eco-Schools are an international initiative designed to encourage whole-school community action on 'Learning for Sustainability'. This environmental management tool is a learning resource and a recognised award scheme which empowers children and young people to take action towards an economically, socially and environmentally just world. The Eco-Schools programme is managed in Scotland by Keep Scotland Beautiful.

Other school initiatives that aim to get children out of the classroom and either into their local community or developing their school grounds include Polli:nation a UK wide initiative supporting pupils from 260 schools to turn their school grounds and other areas within their local communities into pollinator friendly habitats. Unfortunately, none of the schools selected in Scotland are within this project's area although they will still be able to get involved in this initiative.

Priority Project 6 through Scotland's Biodiversity- a route map to 2020, aims to increase secondary and primary schools access to greenspace and nature for outdoor learning as part of the wider 'Learning for Sustainability' agenda. Through this, it aims to work with 100 schools by 2020 that

have pupils who live in the 20% most deprived areas. Of the schools identified in East Lothian none are classed as having pupils who live in the 20% most deprived areas.

There is a lot of scope for schools to get involved with enhancing their grounds for wildlife and for the pupils through the RHS School gardening scheme and Keep Scotland's Beautiful Eco-schools as well as other initiatives. It may be that further support is required to encourage more schools to actively get involved for the benefit of the school children and for declining insect pollinator populations.

4.2 Hospitals and Care Homes

Of the 17 hospitals and care homes identified within this project, 3 are hospitals that are well used by hundreds of patients and visitors every day. It is well documented of the health and well-being benefits for people with local and easy access to wildlife as well as the increase in recovery time of patients in hospitals.

Surrounding several of the hospitals are large areas of amenity grassland that have very little benefits for biodiversity and people using and visiting the hospitals. Some hospitals do have designated areas for wildlife but many are limited with funding or with staff. By enhancing hospital grounds for nature through the creation of grassland meadows this will not only add colour and life to the area benefiting both people and wildlife but will also allow for the moving and mixing of species and individuals across the hospital grounds and surrounding landscape. Additionally, small wildlife gardens can be created closer to the hospital within areas that are well used by patients through the use of planters, green walls and/or insect homes (Figure 2).



Figure 2. Example of a green wall that holds a variety of plants, including wildflowers. This particular green wall also has a variety of homes for insects and other bugs.

All patients can be encouraged to get involved with these creation and enhancement projects as well as the management whilst in the hospital and when they finish their treatments, especially for those that live within the local surrounding area.

Due to health and well-being benefits it is also important to provide opportunities for people in care and nursing homes and hospices to get involved in similar projects in their grounds. Care homes often have grounds that residents can walk around either on their own or with visitors. By enhancing these areas for pollinating insects it will provide colour and life to the gardens that will

make a happier and healthier place for the residents to live and enhance their experiences and quality of life.

4.3 Places of Worship and Cemeteries

There are at least 51 places of worship and cemeteries identified within this project. At least five of the total is described as just cemeteries whilst many of the places of worship also include burial grounds.

Many cemeteries and churchyards are well known to be important habitats for a range of wildlife including bats, birds and foxes as they are often less intensively managed as other urban green spaces. A range of habitats are often found at these sites including mature and veteran trees, old walls, wildflowers, bare ground and shrubs. By creating habitat and enhancing areas already present within the grounds this will add colour and life to the churchyards and cemeteries that will not only improve health and well-being of visitors but will provide important stepping stones for wildlife through an area.

Not all the churches identified have grounds that could be enhanced or managed but they can help to inspire local communities to actively get involved with community led projects that could benefit the local area away from the church. It is important to identify which of these churches have access to an outdoor space and what habitats are currently present within these that could be enhanced or better managed for wildlife. This in itself could be a project that engages with communities across Scotland with their local place of worship.

4.4 Historic Landmarks and Buildings

Of the 12 different historic landmarks and buildings identified during this project, three are owned and managed by the National Trust of Scotland (NTS) and two are owned and managed by Historic Environment Scotland (HES). These landmarks include Gosford House, Newhailes and Preston Mill. Many of these sites are now tourist attractions which attract thousands of visitors a year.

Due to their historic value it is unlikely that many of these landmarks could be influenced with creating large wildflower meadow areas and other habitat, especially in sensitive areas, but it may be that small projects could influence management within small areas of a site for the benefit of pollinating insects and other wildlife, especially at sites that are known for their gardens. This could be through the installation of solitary bee homes for wood nesting species and the creation of small wildflower areas within the gardens themselves.

4.5 Train Stations

There are seven train stations that have been identified in this project that are used by thousands of people every day, including Dunbar, Musselburgh and Wallyford.

Some of the train stations may have some ground that is currently managed as gardens, often with the help of a local community group or adopters. For those that have little ground they may have planters of varying size that are planted with seasonal garden plants. By planting wildflowers within the planters or surrounding grounds this will help reduce costs of buying seasonal garden plants and reduce maintenance time. Green walls shown in Figure 2 could be placed alongside walls that are outside to further enhance the station for pollinating insects that would also provide colour and life benefitting passengers using the stations.

4.6 Golf Courses

East Lothian is well known for its golf courses and there are 16 in the project area that cover a total of 1,024.2 ha of ground.

Golf courses are well known to act as important areas for wildlife, especially in an urban area due to the various habitats present, such as woodland, hedgerows, rough grassland, ponds, ditches and heathland. Golf courses cover 1% of land in the United Kingdom. Generally between 40 – 60% of a golf course is out of play representing a significant land resource that can potentially be made available for wildlife protection and nature conservation. Many golf clubs are recognising that a naturalistic golf course environment which is attractive for wildlife is also generally more attractive to golfers.

Buglife's current meadow creation project 'Fife's Buzzing', a three year project funded by Heritage Lottery Fund and Fife Environment Trust, has enhanced Dunnikier golf course in Kirkcaldy for biodiversity by planting native and diverse wildflower species into areas that are not in play and around ponds. These have helped create a healthier place for wildlife and for the people using the course as well as getting the local community and schools involved with habitat creation events through volunteer activities.

The Golf Environment (GEO) was founded to support the golfing industry, helping it to deliver and be recognized for a positive impact for the people and nature that it touches, now and in the future. They are currently developing an awards system that encourages golf courses around the world to create areas within their grounds to further benefit wildlife. Through their system, individual golf courses will be able to identify what they are currently doing that is benefitting local wildlife but also other activities that would provide further benefits. This could positively benefit not only pollinating insects with the planting of native species of wildflower within meadow areas that are local to the golf course, but also aquatic invertebrates through the enhancement of ponds and wildlife such as Longhorn beetles that require dead wood for their lifecycle with the enhancement and creation of areas of dead wood.

4.7 Public Parks and Play Spaces

Scotland's Greenspace Map, available from SNH, was used to identify and map the location of public parks and play spaces across the project area. Scotland's Greenspace Map was compiled in 2011 from greenspace data provided by the 32 Scottish local authorities and categorises greenspace into 23 different open space types (for example, public parks, private gardens, play areas, semi-natural, community gardens and allotments). As some of this information is incomplete, such as the names of the parks, information was also obtained using local authority websites and other sources.

A total of 27 public parks and play spaces were identified covering a total of 104.2 ha. Many of these parks are well used by local communities and visitors every day for walking, cycling, running or playing.

Most parks have large areas of amenity grassland that is cut several times over a year and has very little benefits to biodiversity because of this. Through Buglife's Get Britain Buzzing campaign, we have been transforming mown grassland in parks into colourful wildflower areas for both people and wildlife to use and enjoy. In Scotland these projects have so far occurred out with the project area of the John Muir Pollinator Way in Glasgow, Perth and currently in Fife and North Lanarkshire. For example, just over half way through the three year 'Fife's Buzzing' project, Buglife has engaged with 1,057 people in the creation and enhancement of over 5 ha of wildflower meadow at 13 parks across Fife.

Through these projects we have recognised that it is important that if changing the management at parks and/or creating wildflower areas for wildlife that local communities are consulted before hand so they can decide on the best areas within their local park and the size of the area to be created

and managed. It may be that all of a park is well used over the year by dog walkers and picnickers so only small edge areas could be enhanced. It is these small areas that could encourage the creation of larger areas once the public understand the change being undertaken in their local area.

Local authorities across Scotland and the rest of the UK are facing major cutbacks and are looking at ways to reduce spending. Several are known to be looking at reducing their grass cutting regime within certain areas of amenity grassland. This is great news for pollinating insects that will be able to find forage and nesting habitat within areas that are cut less regularly but not if these aren't properly managed by being cut and lifted once a year. It is important that wildflower meadow areas are managed appropriately to prevent grasses becoming dominant and turning into rank grassland. Management of grasslands is site dependent and could involve grazing or cutting once a year and removing the cuttings. With a reduction in grass cutting, councils are realising that they don't have equipment to cut and lift once a year and so hire a contractor to do this, which can be an expense they can't afford within the current climate.

Several of the parks identified in this project may have designated Friends of Groups that get involved with habitat creation and management projects so as to enhance their local area. Friends of groups could apply for funding to enhance their local park for biodiversity through the creation and management of grassland.

4.8 Country Parks

Of the 36 country parks across Scotland, only one is located within this project, John Muir in Dunbar. This Country Park is 684.25 ha in size and from it can be seen spectacular views of the historic Bass Rock. The John Muir Country Park has a range of habitats that are important for wildlife including estuarine, grassland, salt-marsh and woodland.

This Country park has its own dedicated Countryside Ranger service that not only helps to manage the park but also engages with the local community and school children through events run all year round. Due to the location of this country park and the services and events available it attracts huge numbers of visitors every year.

It is important that country parks follow management plans to ensure that they remain viable for wildlife and that the habitat is managed appropriately so that both people and animals can continue to use and visit the parks in the future.

4.9 Sites of Importance for Nature Conservation

There are a total of 17 SINC covering 2,051.86 ha of land in this project area.

SINCs are sites that have been designated as being important for nature conservation due to the habitats and wildlife that are present. For sites identified through this project a range of habitats are present, including woodland, heathland, reservoirs, ponds, ditches and grassland meadows. It is important that management plans are written for each site and that the correct regime is in place to ensure long-term survival of the site and its habitats for the future protection of wildlife. As it was very difficult to find information about individual sites it is assumed that management plans, if there are any are not accessible to the public or have yet to be completed.

4.10 Site of Special Scientific Interest

SSSI are those areas of land and water (to the seaward limits of local authority areas) that are considered to best represent our natural heritage, due to their species diversity and habitats, rocks and landforms present as well as a combinations of these features. SSSIs are protected by law and it

is an offence for any person to intentionally or recklessly damage them. SSSI are designated by SNH under the Nature Conservation (Scotland) Act 2004.

There are over 1,425 SSSIs across Scotland, of which only four are within this project and this covers 96.42 ha; this includes the SSSI along the Firth of Forth which is shared amongst the local authority areas of Fife, Clackmannanshire, Stirling, Falkirk, West Lothian, City of Edinburgh and East Lothian and is a total of 7,435.48 ha in size and have not been included within Table 1.

Most SSSIs are in private ownership and SNH works closely with their owners and managers to ensure appropriate management of the sites natural features and to ensure that decision-makers, land managers, their agents and advisors, as well as local authorities and other public bodies, are aware of SSSIs when considering changes in land-use or other activities which might affect them.

Any Scottish public body proposing to carry out an operation that may affect an SSSI must notify SNH before starting. SNH provides each SSSI owner and occupier with a site management statement that describes the interest of the site and explains the management needed to conserve its protected natural features. For those sites which are known for their grasslands it is important that these management plans are stuck to and that the meadows are appropriately managed to ensure long-term survival of the site for their biological features.

4.11 Local Nature Reserves

There are 72 designated LNRs across Scotland that provides wild spaces where some of our rare species as well as our common species can thrive. LNRs offer a more natural environment than parks and gardens, but are still readily accessible to, and for a wide range of people.

There is only one LNR within the project area, Aberlady Bay which is a significant 575.23 ha in size. Aberlady Bay LNR was the first site to be designated a Nature Reserve in 1952 for its saltmarsh, dunes and grassland. It comprises a complete set of habitats from low water right through to salt marsh and sand dune, unchanged by the influence of people. All LNRs should have management plans that are strictly followed to protect the site for the habitats that it supports along with the wildlife that depends on this.

4.12 Open Mosaic Habitat on Previously Developed Land

OMHPDL is a UKBAP priority habitat as its mosaic of habitats provides homes for a number of wildlife species and allows a natural process of succession to occur which is often limited in the over-managed countryside. Derelict sites often have areas of bare ground, early successional communities, grasslands, wetland, scrub depending on how long the site has been abandoned, soil conditions and local climate.

In 2013, a report by Macadam *et al.* remotely assessed sites on Scotland's vacant and derelict land register for OMHPDL using Google Earth maps. Of the 4,118 sites on the 2011 register, 586 were selected as potentially having OMHPDL and should be ground truthed and this amounted to over 5,600 ha of land. Of this total, 3 lie within this project and are only 2.43 ha in total area. Most of the sites with OMHPDL appear to have areas of bare ground and grassland on site. Ground truthing these sites would help to identify if the site has the UKBAP priority habitat OMHPDL and whether management is required to ensure long-term viability of the site.

Brownfields with OMHPDL are known to be important for wildlife due to a lack of management and low nutrients in the soil that often creates a mosaic of habitats. Many rare and scarce species have been recorded at brownfield sites, often as many that are associated with ancient woodlands. Due

to natural succession, many of these sites have a limited lifespan but as sites are lost to development, new sites are added that allow succession to start again.

4.13 Other Opportunities

During the mapping of opportunities for this B-lines project, other areas were recognised as being possibilities but were not mapped due to a lack of information, the number of these sites as well as the complexity of mapping them. This includes areas of amenity grassland identified on Scotland's Greenspace Map, including amenity sites recognised as residential, business and for transport. These areas of amenity grassland include road verges through our urban areas as well as regularly mown areas of amenity that are not classified as parks or play spaces but can often be large in size. All of these areas of amenity are opportunities for creating habitat for pollinators across an urban area that will allow the moving and mixing of individuals and species across these areas with more natural areas of habitat.

As well as passing through urban areas, the John Muir Way also passes through agricultural areas which were not mapped due to a lack of information on the location and use of fields. By creating wildflower strips and planting hedges along field edges this will create habitat corridors for pollinating insects and other wildlife allowing them to pass through agricultural areas safely to other areas and this will also help with the mixing of individuals and species. Wildflower strips provides additional benefits by increasing free pollination services of crops and attracting insects such as hoverflies, soldier beetles and lacewings who's larvae feed on pests such as aphids.

5. Conclusion

The 134 mile route of the John Muir Way passes through villages and towns in nine different local authority areas. Various organisations are currently involved with a variety of different projects along and around the route of the John Muir Way. For example, this includes Sustrans who are heavily involved with the cycle path network, Inner Forth Landscape Initiative which has a range of projects for biodiversity and people in Grangemouth and Bo'ness, Edinburgh Living Landscapes that are creating and managing grassland habitats within the City of Edinburgh as well as a number of community groups within the villages and towns will manage local community gardens for both people and wildlife.

This project has identified a number of opportunities in East Lothian for creating important grassland habitat within parks, golf courses, school grounds and others for pollinating insects that will allow the movement and mixing of individuals and species across Scotland. This will also benefit other wildlife, particularly other invertebrates, and plants.

There are a number of villages and towns that the John Muir Way passes through across East Lothian including Musselburgh, Prestonpans, Cockenzie, Longniddry, Aberlady, Gullane, Direlton, North Berwick and Dunbar. Not only will these new habitats benefit wildlife but also local communities by getting people actively involved in projects and through the addition of colour and life to their areas that will benefit people's health and well-being.

This project has additionally highlighted a number of sites that have been designated for nature conservation that should be managed for the habitats present at their site. By being appropriately managed this will ensure long-term survival of these sites and habitats for wildlife and people to use and enjoy.

By mapping the opportunities at new identified sites and within currently managed sites through this project, this will aid in the future development of projects that will provide real benefits to our

declining populations of pollinating insects of bees, wasps, hoverflies and butterflies as well as other wildlife that these habitats support.

References

Macadam, C., Bairner, S. and Cathrine, C. 2013. Open mosaic habitats on previously developed land: survey and recommendations for habitat planning and management in Scotland. Scottish Natural Heritage Commissioned Report No. 606.

Scottish Natural Heritage Greenspace Scotland Map, available at: <http://www.snh.gov.uk/planning-and-development/advice-for-planners-and-developers/greenspace-and-outdoor-access/scotlands-greenspace/dataset/> last accessed 29th March 2016.

Scottish Natural Heritage Information Service, available at <http://www.snh.gov.uk/publications-data-and-research/snhi-information-service/> last accessed 29th March 2016.

Appendix 1

Opportunities within local communities and landscapes

High School

Belhaven High School, North Lodge, Dunbar, EH42 1NN
Dunbar Grammar School, Summerfield Road, Dunbar, EH42 1NJ
Loretto Senior School, 1-7 Linkfield Road, Musselburgh, EH21 7RE
Musselburgh Grammar School, 86 Inveresk Road, Musselburgh, EH21 7BA
North Berwick High School, Grange Road, North Berwick, EH39 4QS; RHS School Gardening registered
Preston Lodge High School, Park View, Prestonpans, EH32 9QJ
Ross High School, Tranent, EH33 2EQ- RHS School Gardening registered

Primary School

Aberlady Primary School, Moor Road, Aberlady, EH32 0RQ; RHS School Gardening registered
Campie Primary School, 3 Stoneyhill Farm Road, Musselburgh, EH21 6QS; RHS School Gardening registered
Cockenzie Primary School, Osborne Terrace, Cockenzie, EH32 0BX; RHS School Gardening registered
Dirleton Primary School, Chapelhill, North Berwick, EH39 5HE
Dunbar Primary Loch End Campus Primary School, Kellie Road, Dunbar, EH42 1XB
Dunbar Primary School, Lammermuir Crescent, Dunbar, EH42 1DG; RHS School Gardening registered
East Linton Primary School, School Road, East Linton, EH40 3AJ; RHS School Gardening registered
Gullane Primary School, Muirfield Terrace, Gullane, EH31 2HI; RHS School Gardening registered
Law Primary School, Haddington Road, North Berwick, EH39 4QZ;-RHS School Gardening registered
Longniddry Primary School, Kitchener Crescent, Longniddry, EH32 0LR
Musselburgh Burgh Primary School, Kilwinning Street, Musselburgh, EH21 7EE
Pinkie St. Peters Primary School, 44 Pinkie Road, Musselburgh, EH21 7HA
Prestonpans Primary School, Preston Road, Prestonpans, EH32 9EN; RHS School Gardening registered
Regius Christian School, 69A Whitehill Street, Musselburgh, EH21 8QZ; RHS School Gardening registered
Sanderson's Wynd Primary School, Sanderson's Wynd, Tranent, EH33 1DA; RHS School Gardening registered
St. Gabriel's Roman Catholic Primary School, South Grange Avenue, Prestonpans, EH32 9LH; RHS School Gardening registered
St. Martin's Roman Catholic Primary School, High Street, Tranent, EH53 1HJ; RHS School Gardening registered
Stoneyhill Primary School, Clayknowes Way, Musselburgh, EH21 6UL
Wallyford Primary School, 39 Salter Road, Wallyford, EH21 8LB
West Barns Primary School, Forth View, Dunbar, EH42 1TZ

Nursery

Camperdown Nursery, 159A High Street, Prestonpans, EH32 9AY
Honest Town Nursery, 11-19 Stoneybank Terrace, Musselburgh, EH21 6LY
Levenhall Nursery, Moir Place, Musselburgh, EH21 8JD
Links Nursery Musselburgh, 8 Balcarres Road, Musselburgh, EH21 7SD
Loretto School Nursery, Eskdale House, North High Street, Musselburgh, EH21 6JA
Musselburgh Private Nursery, 17-21 Bridge Street, Musselburgh, EH21 6AA
North Berwick Nursery, Law Road, North Berwick, EH39 4PN
Prestonpans Infant School, West Loan, Prestonpans, EH32 9NX; RHS School Gardening registered

Pumpkin Patch Nursery, Belhaven House, Dunbar, EH42 1NS
Sea Horse Nursery, 1 Edinburgh Road, Prestonpans, EH32 0JA
Spark of Genius, Harbour point, Newhailes Road, Musselburgh, EH21 6QD; RHS School Gardening registered

Hospitals and Care Homes

Abbeyfield Scotland Care Home, 17 Hamilton Road, North Berwick, EH39 4NA
Adamswood Nursing Home, 47C Ravensheugh Road, Musselburgh, EH21 7PY
Astley House Nursing Home, 14 Dirleton Avenue, North Berwick, EH39 4BG
Belhaven Hospital, Hospital Road, Dunbar, EH42 1TR
Drummohr Care Home: HC one, 19 Drummohr Gardens, Wallyford, Musselburgh, EH21 8BH
Edenhall Hospital, 21 Edenhall Crescent, Musselburgh, EH21 7JL
Edington Cottage Hospital, 54 St. Baldreds Road, North Berwick, EH39 4PU
Eskgreen Residential Care Home, 10 Shorthope Street, Musselburgh, EH21 7DB
Fa'side Lodge Residential Care, 33-43 Church Street, Tranent, EH33 1AD
Fidra House Nursing Home, 67 Dirleton Avenue, North Berwick, EH39 4QL
Foresight Residential Care Home, 22 Linkfield Road, Musselburgh, EH21 7LQ
Lammermuir House Care Home, East Links Road, Dunbar, EH42 1LT
Levenhall Nursing Home, Levenhall Nursing Home, 13-14 Hope Place, Musselburgh, EH21 7QD
Muirfield Care Home, 37 Main Street, Gullane, EH31 2AA
North Berwick Retirement Living, 1 Tantallon Road, North Berwick, EH39 5NF
The Abbey Home for Older People, Old Abbey Road, North Berwick, EH39 4BP
Tranent Care Home: HC one, 5 Coal Neuk, Tranent, EH33

Places of Worship and Cemeteries

Abbey Church, 114 High Street, North Berwick, EH39 4HE
Aberlady Parish Church and Cemetery, Kirk Stables, Main Street, Aberlady, EH32 0RB
Belhaven Parish Church, 40 Kirk Park, Dunbar, EH42 1BJ
Bethel Hall, 1 New Street, Cockenzie, Prestonpans, EH32 0HN
Catholic Church, 9 Law Road, North Berwick, EH39 4PN
Chalmers Memorial Church, 1 Gosford Road, Port Seton, Prestonpans, EH32 0JP
Church of Christ Meeting Place, 31 Church Street, Tranent, EH33 1AD
Church of Scotland and Cemetery, 2C Queen's Road, Dunbar, EH42 1LB
Cockenzie and Port Seton Old Parish Church, 40 High Street, Cockenzie, Prestonpans, EH32 0HP
Cockenzie Methodist Church, 22 Hawthorn Terrace, Cockenzie, Prestonpans, EH32 0JG
Dunbar Parish Church, Queen's Road, Dunbar, EH42 1LB
Gospel Hall, 92 New Street, Musselburgh, EH21 6JQ
Gullane Parish Church, East Links Road, Gullane, EH31 2AE
Inveresk Cemetery, Inveravon Terrace, Musselburgh, EH21 7PE
Inveresk Church Hall, 19 Dalrymple Loan, Musselburgh, EH21 7DH
Kingdom Hall of Jehovah's Witnesses, 123 Church Street, Tranent, EH33
Kirk Ports Cemetery, 43b Kirk Ports, North Berwick, EH39
Lighthouse Central Church, 20 Orchard Crescent, Prestonpans, EH32 9JL
Longniddry Parish Church, 6 Elcho Road, Longniddry, EH32 0LB
Musselburgh Baptist Church, 68 New Street, Musselburgh, EH21 6JQ
Musselburgh Congregational Church, 8 Links Street, Musselburgh, EH21 6JL
North Berwick Cemetery, Cemetery Lodge, Tantallon Road, North Berwick, EH39 5NF
Northesk Parish Church, 20A Bridge Street, Musselburgh, EH21 6AG
Our Lady of Loretto Church, 17 Newbigging, Musselburgh, EH21 7AJ
Our Lady of the Waves Church, St Anne's Church, Westgate, Dunbar, EH42 1JL
Prestonkirk Church and Cemetery, 10 B1407, East Linton, EH40 3ED

Prestonpans Cemetery, 52 Cameron Way, Prestonpans, EH32 9FH
 Prestonpans Churchyard and Cemetery, 15 Kirk Street, Prestonpans, EH32
 Saint Adrian's Church, Sandy Loan, Gullane, EH31 2BH
 Saint Clement's and Saint Ninian's Church of Scotland, 1 MacBeth Moir Road, Musselburgh, EH21 8JB
 Saint Clement's and St. Ninian's, 32 Salters Road, Wallyford, Musselburgh, EH21 8AE
 Saint Peter's Church, 1A Linkfield Road, Musselburgh, EH21 7RF
 Salvation Army Church, 24A Winton Place, Tranent, EH33 1AE
 Scottish Episcopal Church, 11 May Terrace, North Berwick, EH39 4BA
 St. Andrew Blackadder Church, St Andrew Blackadder Church, High Street, North Berwick, EH39 4HG
 St. Andrew's High Church, 56/4 Millhill, Musselburgh, EH21 7RW
 St. Anne's Episcopal Church, 2 Westgate, Dunbar, EH42 1JL
 St. Baldred's Church, 6 Dirleton Avenue, North Berwick, EH39 4AY
 St. Gabriel's Roman Catholic Church, 50-54 West Loan, Prestonpans, EH32 9JX
 St. Martin's Church, 150 High Street, Tranent, EH33 1HJ
 St. Michael's Parish Church, 2 The Inveresk Estate, Inveresk, Musselburgh, EH21 7UA
 St. Peter's Episcopal Church, 3 Linkfield Road, Musselburgh, EH21 7AF
 Star of the Sea North Berwick, 8-9 Law Road, North Berwick, EH39 4PN
 The Baptist Church, Harmony House, Harmony Place, North Berwick, EH39 4HT
 The Bridge Christian Centre, 49 Bridge Street, Musselburgh, EH21 6AA
 Tranent Cemetery, 12 Meadowmill Loan, Tranent, EH33 1FJ
 Tranent Parish Church, Dovecot Brae, Tranent, EH33 1BW
 Viewforth Port Seton Gospel Hall, 6 Cope Lane, Port Seton, Prestonpans, EH32 0DP
 Wallyford Living Room Church, 30C Salters Road, Wallyford, Musselburgh, EH21 8AA
 Wesleyan Chapel, 9 Victoria Street, Dunbar, EH42 1ET
 Whitekirk Church, 2 A198, North Berwick, EH39 5PR

Historic Landmarks and Buildings

Archerfield House, Dirleton, EH39 5HQ
 Bankton house, Johnnie Cope's Road, Prestonpans, EH33 1NG
 Biel House, Dunbar, EH42 1SY
 Preston mill and Phantassie Doocot, Preston Road, East Linton EH40 3DS; owned and managed by National trust of Scotland
 Dirleton Castle and Garden, Dirleton Road, North Berwick EH39 5ER; owned and managed by Historic Environment Scotland
 Gosford House and Park, Longniddry, Eh32 0PY
 Inveresk Lodge Garden, 24 Inveresk Village Road, Musselburgh, EH21 7TE; owned and managed by National Trust of Scotland
 Newhailes Estate, Newhailes, Musselburgh, EH21 6RY; owned and managed by National Trust of Scotland
 Northfield House, Preston Road, Prestonpans, EH32 9JZ
 Pinkie House, Loretto School, 1-7 Linkfield Road, Musselburgh, EH21 7RE
 Seton Castle, Port Seton, EH32 0PG
 Tantallon Castle, North Berwick, EH39 5PN; owned and managed by Historic Environment Scotland

Train Stations

Dunbar Station, Station Road, Dunbar, EH42 1JX
 Longniddry Station, Longniddry, EH32 0LS
 Musselburgh Station, Musselburgh, EH21 6TT
 North Berwick Station, North Berwick, EH39 4BY
 Prestonpans Station, Prestonpans, EH33 1NG
 Shawfair Station, 9 Harelaw, Dalkeith, EH22 1SB

Wallyford Station, Wallyford, EH21 8DZ

Golf Courses

Archerfield Links, Archerfield House, North Berwick, EH39 5HQ
Craigielaw Golf Club, Craigielaw, Aberlady, EH32 0PY
Dunbar Golf Course, East Links, Dunbar, EH42 1LL
Glen Golf Club, East Links Tantallon Terrace, North Berwick, EH39 4LE
Gullane Golf Club, West Links Road, Gullane, EH31 2BB
Kilspindie Golf Club, The Clubhouse, Aberlady, EH32 0QD
Longniddry Golf Club, Links Road, Longniddry, EH32 0NL
Luffness New Golf Club, Aberlady, EH32 0QA
Muirfield Golf Club, Duncur Road, Gullane, EH31 2EG
Musselburgh Golf Club, Monktonhall, Musselburgh, EH21 6SA
Musselburgh Old Course Golf Club, Stables Pavillion Musselburgh Racecourse Complex, Balcarres Road, Musselburgh, EH21 7SR
North Berwick Golf Club, New Club House, Beach Road, North Berwick, EH39 4BB
Royal Musselburgh Golf Club, Prestongrange House, Musselburgh, EH32 9RP
The Renaissance Club, Cowden Hill Drive, North Berwick, EH39 5HS
Whitekirk Golf Course, North Berwick, EH39 5PR
Winterfield Golf Course, North Road, Dunbar, EH42 1AU

Public Parks and Play Spaces

Haugh Park, 11 Monktonhall Terrace, Musselburgh, EH21 6ER, grid reference NT 33746 71929
Lauderdale Park, 5A Bayswell Road, Dunbar, EH42 1AB, grid reference NT 67649 79057
Levenhall Links Leisure Parks, 2 Hope Place, Musselburgh, EH21 7QE, grid reference NT 36045 73261
Lewisvale Public Park, 9 Double Dykes, Inveresk, Musselburgh, EH21 7TF, grid reference NT 34971 72039
Lodge Grounds, 15 St. Baldred's Crescent, North Berwick, EH39 4PZ, grid reference NT 55589 85083
Loretto School Newfield Sportground, 3 Mountjoy Terrace, Musselburgh, EH21 6JR, grid reference NT 34310 73101
Musselburgh Rugby Recreation Ground, 1-4 Stoneyhill Farm Road, Musselburgh, EH21 6NY, grid reference NT 33520 72463
Polson Public Park, 33 Lammermoor Terrace, Tranent, EH33 1NJ, grid reference NT 39830 72828
Public Park and Garden, 14 E Lorimer Place, Cockenzie, Prestonpans, EH32 0JD, grid reference NT 40072 75535
Public Park and Garden, 1b Goose Green Road, Gullane EH31, grid reference NT 48202 82891
Public Park and Garden, 22 Cross Cottages, Prestonpans EH32, grid reference NT 39020 74106
Public Park and Garden, 22 McLeod Crescent, Prestonpans, EH32 9NZ, grid reference NT 38877 74398
Public Park and Garden, 26 Cotlands Avenue, Longniddry, EH32 0QU, grid reference NT 43598 75656
Public Park and Garden, 35 Links Road, Port Seton, Prestonpans, EH32 0EA, grid reference NT 41082 75902
Public Park and Garden, 4 Marine Terrace, Gullane, EH31 2AY, grid reference NT 48012 83132
Public Park and Garden, 40 Edinburgh Road, Tranent, EH33 1AW, grid reference NT 39902 73005
Public Park and Garden, 5 Charteris Road, Longniddry, EH32 0NT, grid reference NT 43886 76125
Public Park and Garden, 5 Hill Road, Gullane, EH31 2BE, grid reference NT 47714 83053
Public Park and Garden, 55 South Seton Park, Port Seton, Prestonpans, EH32 0BW, grid reference NT 40585 75432
Public Park and Garden, 6 King's Park, Longniddry, EH32 0QL, grid reference NT 43714 75977
Public Park and Garden, 7 Marshall Street, Cockenzie, Prestonpans, EH32 0HT, grid reference NT 39959 75709

Public Park and Garden, A198, Longniddry, EH32, grid reference NT 44434 76802
Public Park and Garden, B1361, Prestonpans, Tranent, EH33 1LY, grid reference NT 40186 73959
Public Park and Garden, Fairview, Dirleton, North Berwick, EH39 5HG, grid reference NT 51088 83575
Public Park and Garden, Main Road, North Berwick, EH39, grid reference NT 51438 83972
Recreation Park, 1/9 Greenheads Road, North Berwick, EH39 4RA, grid reference NT 56166 84791
Winterfield Park, 15 North Road, Dunbar EH42 1AS, grid reference NT 67264 79126

Country Park

John Muir Country Park, Dunbar, EH42 1TY

John Muir Country Park covers some of the most spectacular East Lothian coastline at 684.25 ha and is a haven for wildlife and people too. From the Castle Ruins in Dunbar, to the Peffer Burn six kilometres to the north, the Park includes the Cliff Top Trail, with fine views of the sea and the historic Bass Rock; the long sandy sweep of Belhaven Bay; the River Tyne estuary; and extensive areas of grassland, salt-marsh and woodland. This country park has a friends of group.

Sites with conservation designations

Site of Importance for Nature Conservation

Archerfield Estate, Dirleton, site size 321.3 ha, grid reference NT 50200 84700

This large coastal estate includes Archerfield Links Golf Course and Archerfield House. A mixture of habitats is present including mixed woodland, grassland and wetland.

Balgone Loch, Balgone Estates, site size 3.4 ha, grid reference NT 56500 82600

Area of open water with surrounding wetland and scrub habitat.

Biel Water, site size 49.68 ha, grid reference NT 65700 78500- NT 60400 69600

The Biel Water runs for 4.5 kilometres from the centre of East Lothian at Luggate Burn and the Whittinghame Water, through Stenton and into West Barns where it enters the North Sea at Belhaven Bay. The banks of the river have a variety of habitats including wetland, grassland, scrub and woodland.

Cowpits Wood, Monktonhall, site size c. 25 ha, grid reference NT 34700 70700

The River Esk passes through a varied woodland which has a rich ground flora.

Gosford Estate, Craighelaw, site size 227.6 ha, grid reference NT 45500 78700

This large coastal estate encompasses Gosford Park and House. There is a large broadleaved plantation, grassland some of which is amenity and ponds. Redhouse Burn and Harestanes Burn pass through the site.

Hailes and Howkins Wood, site size c. 11 ha, grid reference NT 57600 75900

The River tyne passes through a mixed woodland which has a rich flora and fauna.

Longniddry to Haddington Railway, site size 13.4 ha, grid reference NT 44700 76300 to NT 50800 73900

A derelict railway siding that goes from Longniddry to Haddington with a wide variety of habitats and a rich flora & fauna.

Musselburgh Shore and Lagoons, Musselburgh, site size 281.5 ha, grid reference NT 34500 73800

The area of mud flat is estuarine and is important for feeding and roosting wintering birds. This site also includes the lagoons with pools and grassland that is also important for birds. The River Esk flows into this site.

North Berwick Law Reservoir, North Berwick, site size 2.5 ha, grid reference NT 55200 84000

A large reservoir with open water and surrounding mixed woodland that is south of North Berwick and adjacent North Berwick Law.

Redhouse Dean, Spittal, site size 7.5 ha, grid reference NT 46600 76500

Mixed woodland with Redhouse Burn passing through it and a rich ground flora.

River Esk, site size 58.3 ha, grid reference NT 34500 73400 to NT 34100 69200

A long winding river that flows Whitecraig to Musselburgh flowing into the Firth of Forth. A variety of habitats are present along the banks of the river, including woodland, grassland and wetland.

River Tyne, site size 110.64 ha, grid reference NT 62500 79300 – NT 40300 67700

This long meandering river starts in Midlothian and continues for 30 miles eventually flowing into the North Sea at Belhaven Bay, Dunbar. A variety of habitats are present along the banks of the river, including woodland, grassland and wetland.

Sheriff Hall Grassland, Balgone Estates, site size 4.5 ha, grid reference NT 56100 81800

An open area of grassland which is base rich and important for flora supporting several rare species.

Spittal to Gullane Railway, site size 6.7 ha, grid reference NT 47300 77400 to NT 48500 82500

A long site that follows old railway sidings with a wide variety of habitats of grassland and scrub with a rich flora & fauna.

Spott Burn, site size 30.77 ha, grid reference NT 69600 78200 to NT 66200 71800

This burn flows from the centre of east Lothian down into Dunbar and out into the Firth of Forth. Along the river is important riparian habitat, and banks of grassland, woodland and scrub.

Tynninghame Estate, Tynninghame, site size 872.36 ha, grid reference NT 62100 80000

This estate is on the coast and has a variety of habitats from plantation woodland, semi-natural woodland, arable, grassland riparian along the River Tyne which flows along the south of the site into the Firth of Forth.

Waighton Crossroads Roadside Verge, site size 0.14 ha, grid reference NT 56300 81000

A very small area of road verge grassland that is rich with rare plant species.

Site of Special Scientific Interest

Firth of Forth, SNH site code 8163, size 7435.48 ha, grid reference NS 851934 to NO 632087 & NT 678792; this SSSI is shared with Fife, Clackmannanshire, Stirling, Falkirk, West Lothian, City of Edinburgh and East Lothian.

The Firth of Forth SSSI is an extensive coastal area located on the east coast of Scotland. It stretches from Alloa to Crail on the north shore and to Dunbar on the south shore. It includes the estuary upriver from the Forth bridges and the firth east of the bridges. It is of importance for a variety of geological and geomorphological features, coastal and terrestrial habitats, vascular plants, invertebrates, breeding, passage and wintering birds.

Notified Natural Features:

Geological: Stratigraphy: Lower Carboniferous (Dinantian – Namurian part), Upper Carboniferous (Namurian (part) – Westphalian)
 Igneous petrology: Carboniferous – Permian Igneous
 Mineralogy: Mineralogy of Scotland
 Palaeontology: Arthropoda (excluding insects & trilobites), Palaeozoic Palaeobotany, Permian - Carboniferous Fish/Amphibia
 Quaternary geology and geomorphology: Quaternary of Scotland
 Geomorphology: Coastal Geomorphology of Scotland

Biological: Coastlands: Maritime cliff, Saltmarsh, Sand dunes
 Intertidal marine habitats and saline lagoons: Mudflats, Saline lagoon
 Lowland grassland: Lowland neutral grassland
 Fens: Transition grassland
 Vascular plants: Vascular plant assemblage
 Invertebrates: Beetle assemblage
 Butterflies: Northern brown argus (*Aricia artaxerxes*)
 Non-breeding birds: Red-throated diver (*Gavia stellata*), Great crested grebe (*Podiceps cristatus*), Slavonian grebe (*Podiceps auritus*), Cormorant (*Phalacrocorax carbo*), Pink-footed goose (*Anser brachyrhynchus*), Shelduck (*Tadorna tadorna*), Mallard (*Anas platyrynchos*), Wigeon (*Anas penelope*), Scaup (*Aythya marila*), Eider (*Somateria mollissima*), Long-tailed duck (*Clangula hyemalis*), Common scoter (*Melanitta nigra*), Velvet scoter (*Melanitta fusca*), Goldeneye (*Bucephala clangula*), Red-breasted merganser (*Mergus serrator*), Oystercatcher (*Haematopus ostralegus*), Ringed plover (*Charadrius hiaticula*), Golden plover (*Pluvialis apricaria*), Grey plover (*Pluvialis squatarola*), Lapwing (*Vanellus vanellus*), Knot (*Calidris canutus*), Dunlin (*Calidris alpina alpina*), Bar-tailed godwit (*Limosa lapponica*), Curlew (*Numenius arquata*), Redshank (*Tringa totanus*), Turnstone (*Arenaria interpres*), Sandwich tern (*Sterna sandvicensis*)
 Breeding birds: Eider (*Somateria mollissima*), Shelduck (*Tadorna tadorna*), Ringed plover (*Charadrius hiaticula*)

Forth Islands, SNH site code 653, size 20.79 ha, grid reference NT513868, NT535866, NT553870
 This site comprises Craigleith, the Lamb and Fidra, three volcanic islands lying up to 1.2km offshore from North Berwick, which together hold a nationally important seabird colony.

Notified Natural Features:

Biological: Breeding seabirds: Cormorant (*Phalacrocorax carbo*), Puffin (*Fratercula arctica*)

North Berwick Law, SNH site code 1228, size 33.61 ha, grid reference NT 555842

North Berwick Law SSSI is located approximately one kilometre south of North Berwick, East Lothian. The steep sides of this volcanic plug are covered with large areas of unimproved, mineral rich grassland, a rare and declining habitat in East Lothian. This is an extensive and representative area of this habitat.

Notified Natural Features:

Biological: Lowland grassland: Lowland calcareous grassland

Traprain Law, SNH site code 1560, size 42.02 ha, grid reference NT 582746 and 576751

Notified Natural Features:

Geological: Igneous petrology: Carboniferous-permian igneous

Biological: Acid grassland: lowland acid grassland

Calcareous grassland: lowland calcareous grassland

Non-vascular plants: lichen assemblage

Local Nature Reserve

Aberlady Bay, SNH site code 8122, size 575.23 ha, grid reference NT 45821 80801

Aberlady Bay LNR was the first site to be designated a Nature Reserve, in 1952 for its saltmarsh, dunes and grassland. It comprises a complete set of habitats from low water right through to salt marsh and sand dune, unchanged by the influence of people. The area within the Reserve is extensive, and, in consequence, the paths across it take time to cover. This reserve has a friends of group.

Sites with Open Mosaic Habitat on Previously Developed Land

Brunton Ironworks B, Mall Avenue, Musselburgh, SVDL site code HELC8B, grid reference NT 34060 72265

Derelict land and buildings that is 1.17 ha with open grassland, bare ground and some late successional vegetation. ,

Gasworks Site, Balcarres Road, Musselburgh, SVDL site code ELC10, grid reference NT 34800 73340

Site is owned by a gas company and is currently derelict land and 0.88 ha in size. The aerial image is over 10 years old and shows bare ground with some vegetation.

Meadowmill Nursery, Prestonpans, SVDL site code ELC25, grid reference NT 40480 74190

Privately owned derelict land and buildings that are 0.38 ha and adjacent to railway land. Site has areas of bare ground, open grassland and scrub around the edges.

Contact us: Buglife, Balallan House, 24 Allan Park,
Stirling, FK8 2QG

www.buglife.org.uk

Tel: 01786 447504

Email: info@buglife.org.uk

[@buzz_dont_tweet](https://twitter.com/buzz_dont_tweet)

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Photo credits L-R; Ladybird spider (*Eresus sandaliatus*) © S. Dalton, Jellyfish © D. Huffman, Tansy beetle (*Chrysolina graminis*) © S. Falk and Large garden bumblebee (*Bombus ruderatus*) © S. Falk



Saving the small things that run the planet

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